

Anal III 5, longest ray $\frac{4}{5}$ length of head, reaching root of caudal. Pectoral as long as or a little shorter than head, not reaching ventral; latter below middle of base of dorsal. Caudal fin deeply forked, upper lobe pointed and much longer than lower. Caudal peduncle slightly longer than deep. Scales $27\frac{4\frac{1}{2}}{4\frac{1}{2}}$, 2 between lateral line and ventral, 12 round caudal peduncle. Olive-brown above, golden below, the scales darker at the base; fins dark.

Total length 340 mm.

Two specimens from the Kribi River.

This species must be placed near *B. perplexicans*, Blgr., from the Tana River, E. Africa; like that species and the Abyssinian *B. plagiostomus*, Blgr., the shape of the mouth approximates it to the species of *Varicorhinus* or *Capoëta*; whilst in the condition of its barbels it serves to connect the species with two pairs of barbels with those with a single pair.

XXVII.—*Notes on the Structure of the Teeth of some Poisonous Snakes found in Travancore.* By R. SHUNKARA NARAYANA PILLAY.

IN offering the following notes on the structure of the teeth of the poisonous Colubrine snakes I do not aspire to lay claim to originality, as my observations have been based on the lines of those already made by eminent men, and refer to a few snakes found in Travancore.

Since April 1901 I have been supplying snake-venom to the Pasteur Institute of India, Kasauli, and to Messrs. Burroughs, Wellcome, & Co.'s Research Laboratory. I had a fancy for the study of snakes, and as Preparator to the Museum I availed myself of the opportunity to make a comparative study of the poisonous and non-poisonous snakes, in the course of which, while examining the skull of a hamadryad (*Naja bungarus*) 14 feet long, the skeleton of which was being articulated for the museum, I noticed a certain peculiarity in the structure of the teeth which, to my mind, appeared to be abnormal—namely, the presence of grooved posterior maxillary teeth.

According to Mr. G. A. Boulenger*, the genus *Naja* is defined as having the poison-fang followed by one or more solid teeth; and in Sir Joseph Fayrer's 'Thanatophidia of India' mention is made of "a second simple tooth at some distance behind the fang." Later on I examined a spirit-specimen of *Naja bungarus*, and in this, too, I found the posterior maxillary teeth were grooved, the grooving being shallow or ill-defined

* 'The Fauna of British India,' Reptilia and Batrachia (1890).

and invisible to the naked eye. I communicated this to Mr. H. S. Ferguson, the Director of the Museum, and he informed Mr. G. A. Boulenger, who, while verifying and confirming the faintly grooved posterior maxillary teeth in the genus *Naia*, a discovery * made by him since the publication of the 'Fauna of British India,' does not seem to have been aware of the more or less grooved palatine series of teeth as well. At his instance I was led to a series of observations on the teeth of various poisonous Colubrine snakes of the subfamily Elapinae so far as they are represented in Travancore, and, in addition, to the grooved functional and reserve fangs.

	Posterior maxillary.	Palatine.	Pterygoid.
<i>Naia bungarus</i> has	3	17	12
— <i>tripudians</i> has	1	5	14
<i>Bungarus caeruleus</i> has	3	10	13

In the above not only are the posterior maxillary and palatine teeth more or less grooved, but all the pterygoid and mandibular series are likewise marked with faintly depressed lines resembling grooves. Furthermore, in connexion with an examination of two skulls of *Hemibungarus nigrescens*, a small poisonous Colubrine snake fairly common on the hills, I found the palatine teeth indistinctly grooved.

Government Museum, Trevandrum,
October 26, 1903.

Obituary Notice: DR. WILLIAM FRANCIS.

DR. WILLIAM FRANCIS was born in London on the 16th of February, 1817. He was educated at University College School and St. Omer. He left St. Omer in 1834 and proceeded to Crefelt, but in the autumn of the same year went to Gera, where he remained for about two years. In 1836 he returned to England and spent a year at the London University (University College), afterwards devoting some time to learning the printing business under Mr. Richard Taylor, to whom he had been apprenticed some time previously. He then went to Berlin, and thence to Giessen, where he studied under Liebig, and did much original work, chiefly on the salts of molybdenum. He took his degree of Doctor of Philosophy at Giessen in 1842.

He early developed a taste for Natural History, and during his stay at Gera he devoted much of his time to entomological study and pursuits. While in England, in 1837, "fresh from the teachings of Ehrenberg, and profoundly influenced by the spirit of scientific research which then, as now, prevailed in Germany," he "suggested to Mr. Richard Taylor the establishment of a journal in which, while its pages were freely open to the original contri-

* 'Catalogue of Snakes,' iii. p. 373 (1896).